



Proposed Code Change  
State Form 41186R

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INDIANA DEPARTMENT OF HOMELAND SECURITY  
CODE SERVICES SECTION  
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Indianapolis, IN 46204

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Code

INSTRUCTIONS:

Only TYPED copy accepted.

(KEY - Dashed line through material to be deleted, underline material to be added)

Use second sheet for any material requiring more space.

Code Title 2009 Indiana Energy Conservation Code		Edition First Edition
Section number and title Various amendments to the proposed Indiana Energy Conservation Code		Page 1 of 7
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PROPOSED CODE CHANGE (Check One)

☒ Change to read as follows ☐ Add to read as follows ☐ Delete and substitute as follows ☐ Delete without substitution

(This proposal is to amend the proposed 2009 Indiana Energy Conservation Code amendments and to add the 2009 International Energy Conservation Code as part of the 2009 Indiana Energy Conservation Code. The first section of this proposal amends portions of the referenced International Energy Conservation Code and the second section of the proposal is for the referenced ASHRAE 90.1 standard.)

~~That certain document~~ This code, titled the 2009 Indiana Energy Conservation Code, shall consist of these ~~that certain documents; the International Energy Conservation Code, 2009 edition, published by the International Code Council, 500 New Jersey Avenue, NW, 6th Floor, Washington, DC, 20001 and the Energy Standard for Buildings Except Low-Rise Residential Buildings, 2007 edition, published by the American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc. 1791 Tullie Circle NE, Atlanta, GA 30329.~~ These documents is are hereby adopted by reference as if fully set out in this rule except for those revisions made in sections 2 through 11 of this rule.

- Delete Chapter 1 and substitute as follows

- Section 101.1 Title; availability. This rule shall be known as the Indiana Energy Conservation Code, 2009 edition and shall be published, except incorporated documents, by the Department of Homeland Security for general distribution and use under that title. Wherever the term "this code" is used throughout this rule it shall mean the Indiana Energy Conservation Code, 2009 edition.

- Section 101.2 Scope and purpose. The scope and purpose of this code is to establish the minimum requirements for the energy conservation design and construction of Class1 structures.

Exception: Townhouses and certain R Occupancies, as designated by Section 310.1 of the Indiana Building Code, are built to the requirements of the Indiana Residential Code.

- Section 101.3 Intent. The intent of this code is to establish minimum requirements for the construction of Class 1 structures, as described in Section 101.2, to achieve the effective use of energy.

- Section 101.4 Referenced Codes and Standards. The codes and standards referenced in this code shall be those that are listed in Chapter 6, and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of Chapter 6 and the standards directly adopted by the Commission, the standards adopted by the Commission shall govern.

- Section 101.5 Appendices and Standards. Provisions in the appendices are not enforceable unless specifically adopted. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

Exception: Where enforcement of a code provision would violate the conditions of the listing, labeling, or manufacturer's installation instructions of the equipment or appliance, the conditions of the listing, labeling, or manufacturer's instructions shall apply.

- Section 101.6 Appeals and Interpretations. Appeals from orders issued by the Fire Prevention and Building Safety Commission or the Division of Fire and Building Safety are governed by IC 4-21.5 and IC 22-12-7. Appeals from orders by a local unit of government are governed by IC 22-13-2-7 and local ordinance. Upon the written request of an interested person who has a dispute with a county or municipal government concerning a building rule, the building law compliance officer may issue a written interpretation of a building law. The written interpretation as issued under IC 22-13-5 binds the interested person and the county or municipality with whom the interested person has the dispute until overruled in a proceeding under IC 4-21.5. A written interpretation of a building law binds all counties and municipalities if the office of the state building commissioner publishes the written interpretation of the building law in the Indiana Register under IC 4-22-7-7(b).

- Section 101.7 Plans. Plans shall be submitted for Class 1 structures as required by the General Administrative Rules (675 IAC 12) and the rules for Industrialized Building Systems (675 IAC 15).

- Section 101.8 Existing Construction. For existing Class 1 structures, see the General Administrative Rules (675 IAC 12) and local ordinance.

- Section 101.9 Additions and Alterations. Additions and alterations to any Class 1 structure shall conform to that required of a new structure without requiring the existing

structure to comply with all the requirements of this code. Additions or alterations shall not cause an existing structure to become unsafe (see the General Administrative Rules (675 IAC 12-4)).

- Section 101.10 Alternate Materials, Methods, and Equipment. Alternate materials, methods, equipment, and design shall be as required by the General Administrative Rules (675 IAC 12-6-11) and the rules for Industrialized Building Systems (675 IAC 15).

In Chapter 2, make the following changes:

(1) Delete the text of Section 201.3 in its entirety and substitute as follows: Where terms are not defined in this code and are defined in the Indiana Building Code (675 IAC 13), Indiana Electrical Code (675 IAC 17), Indiana Fire Code (675 IAC 22), Indiana Fuel Gas Code (675 IAC 25), or Indiana Plumbing Code (675 IAC 16), such terms shall have the meanings ascribed to them as in those codes.

(2) Insert Section 201.3.1 to read as follows: 201.3.1. Terms defined in other codes.

-ICC ELECTRICAL CODE refers to the INDIANA ELECTRICAL CODE (675 IAC 17).

-INTERNATIONAL BUILDING CODE refers to the INDIANA BUILDING CODE (675 IAC 13).

-INTERNATIONAL ENERGY CONSERVATION CODE refers to the INDIANA ENERGY CONSERVATION CODE (675 IAC 19).

-INTERNATIONAL FIRE CODE refers to the INDIANA FIRE CODE (675 IAC 22).

-INTERNATIONAL FUEL GAS CODE refers to the INDIANA FUEL GAS CODE (675 IAC 25).

-INTERNATIONAL PLUMBING CODE refers to the INDIANA PLUMBING CODE (675 IAC 16).

(3) Amend the definition of APPROVED to read as follows: APPROVED. As to materials, equipment, design, and types of construction, acceptance by the code official by one (1) of the following methods:

(1) Investigation or tests conducted by recognized authorities; or

(2) Investigation or tests conducted by technical or scientific organizations; or

(3) Accepted principles. The investigation, tests, or principles shall establish that the materials, equipment, and types of construction are safe for the intended purpose.

(4) Insert the definition for BUILDING CODE to read as follows: BUILDING CODE means the Indiana Building Code.

(5) Amend the definition of CODE OFFICIAL to read as follows: CODE OFFICIAL means the Division of Fire and Building Safety; the local building official as authorized under IC 36-7-2-9 and local ordinance; or the fire department as authorized under IC 36-8-17-9.

(6) Delete the definition of COMMERCIAL BUILDING.

(7) Insert the definition for COMMISSION to read as follows: COMMISSION is the Indiana Fire Prevention and Building Safety Commission as set forth at IC 22-12-2-1.

(8) Insert the definition for DIVISION OF FIRE AND BUILDING SAFETY to read as follows: DIVISION OF FIRE AND BUILDING SAFETY means the Division of Fire and Building Safety of the Indiana Department of Homeland Security created pursuant to IC 10-19-2

(9) Amend the definition of DWELLING UNIT to read as follows: DWELLING UNIT is any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking, and sanitation, as required by this code, for not more than one (1) family, or congregate resident for sixteen (16) or fewer persons.

(10) Amend the definition for LABELED to read as follows: LABELED means equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization engaged in product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

(11) Amend the definition for LISTED to read as follows: LISTED means equipment or materials included in a list published by an organization engaged in product evaluation, that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.

- Section 401.1 Scope. Add an exception to 401.1 as follows: Exception: Residential buildings built to the requirements of the Indiana Residential Code, 675 IAC 14-4.3.

- Section 401.3 Certificate. Delete 403.1 without substitution.

- Section 405 Simulative performance alternative. Delete Section 405 without substitution.

- Section 501.1. Amend Section 505.1 as follows: 501.1 Scope. The requirements contained in this chapter are applicable to ~~commercial~~ Class 1 buildings, or portions of ~~commercial~~ Class 1 buildings. These ~~commercial~~ Class 1 buildings shall meet either the requirements of ASHRAE/IESNA Standard 90.1, *Energy Standard for Buildings Except for Low-Rise Residential Buildings*, or the requirements contained in this chapter.

- Section 502.1. Amend Section 502.1 as follows: 502.1.1 Insulation and fenestration criteria. The *building thermal envelope* shall meet the requirements of Tables 502.2(1) and 502.3 based on the climate zone specified in Chapter 3. ~~Commercial~~ Class 1 buildings or portions of commercial buildings enclosing Group R occupancies shall use the *R*-values from the "Group R" column of Table 502.2(1). ~~Commercial~~ Class 1 buildings or portions of ~~commercial~~ Class 1 buildings enclosing occupancies other than Group R shall use the *R*-values from the "All other" column of Table 502.2(1). Buildings with a vertical fenestration area or skylight area that exceeds that allowed in

Table 502.3 shall comply with the building envelope provisions of ASHRAE/IESNA 90.1.  
- Section 502.1.2.

Amend Section 502.1.2 as follows: 502.1.2 *U*-factor alternative. An assembly with a *U*-factor, *C*-factor, or *F*-factor equal or less than that specified in Table 502.1.2 shall be permitted as an alternative to the *R*-value in Table 502.2(1). Commercial Class 1 buildings or portions of commercial Class 1 buildings enclosing Group R occupancies shall use the *U*-factor, *C*-factor, or *F*-factor from the "Group R" column of Table 502.1.2. Commercial Class 1 buildings or portions of commercial Class 1 buildings enclosing occupancies other than Group R shall use the *U*-factor, *C*-factor or *F*-factor from the "All other" column of Table 502.1.2.

Section 506 Total Building Performance. Delete Section 506 without substitution.

Amend the proposed amendment to ASHRAE 90.1-2007 section 2. Scope as follows:  
Sec. 2. Section 2 is amended as follows:

(a) ~~In Section 2.1 a. delete item 3. without substitution.~~

In Section 2.1 a., 3. new systems and equipment in existing buildings.

(b) ~~In Section 2.3 a., delete "multi-family structures of three stories or fewer above grade".~~

- Add amendment language to the amendment to Section 4.2.3 as follows:

(k) Amend Section 4.2.3 as follows: (no text in published amendments)

**Labeling of material and equipment.** Equipment, materials or products to which have been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above-labeled items and whose labeling indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose.

Change the title of section 5 Amendments as follows:

**675 IAC 19-3.1-5 Section 54 5 amendments**

This proposal adds the 2009 International Energy Conservation Code to the Indiana Energy Conservation Code (InECC) for several reasons. First to help with the enforcement by the regulators in the field. While the two documents have nearly the same requirements the IECC is in code format that inspectors in the field are used to using, as in other ICC codes, and the ICC document references other codes in use in Indiana. The ASHRAE standard is an excellent design document but is not composed in an enforcement format. Designers and designer/contractors will also find the ICC portion of the InECC to be easier to use to evaluate energy installations on smaller projects. Secondly, the ASHRAE standard was developed for Class 1 commercial and high-rise residential buildings; the amendment in Section 2.3 a. changes the standard to a low-rise residential standard by simply removing 10 words. While I have not had time to completely review the change I am uncomfortable with changing the scope of a standard without any stated input from the group that developed the standard, otherwise why does it not apply to low-rise residential in its original scope. The IECC has a section for these low-rise residential buildings. I included an exception that sends the code user to the Indiana Residential Code (InRC) for energy requirements for one and two family dwellings, townhouses and the other Class1 structures that can be built to the InRC. I brought new Chapter One requirements as is usually done during code adoption in Indiana and amended certain Chapter 2 definitions that are standard changes. I deleted sections in the ICC document that corresponded to similar sections that had been deleted in ASHRAE 90.1. There were no changes made to the tabular values in the 90.1 document amendments and since the two are basically the same I did not amend similar values in the ICC document. I did add in amendment text to 90.1 section 4.2.3 since there was none listed in the amendment. Also note that sections 9 and 10 though listed do not have any amendment text. I propose that the language in 90.1 section 2.1 a. be left in since new *systems* need to meet the current rule while excepting equipment, since repairs or replacement of equipment would not be covered under the rule. Thirdly; while the two documents have basically the same building envelope requirements I did note that there are differences in some other sections that would result in what I believe would be substantial energy savings. One such difference is in the duct insulation. In the 90.1 document combined heating and cooling ducts in unconditioned spaces can have as little as R-3.5 in Climate Zone 5 while the IECC requires R-5. In exterior ducts in Climate Zone 5 the 90.1 requirement is R-6 while the requirement in the IECC is R-8. This difference would mean little savings in a large building where most of the ducts are installed inside the thermal envelope but in smaller structures the ducts are often routed through crawlspaces and attics. That plus the fact that there are considerably more smaller buildings built in relation to the larger buildings, that are more often designed to the 90.1 standard, is in it self a good reason the include the IECC in the InECC. And lastly, both documents can be purchased in a combined book allowing more ease of use in the design office and in the fields for inspectors.

**Fiscal impact:** the fiscal impact of the adoption of a new, more restrictive, energy code will be significant to the cost of construction. However, energy savings advocates have

informed us that over the course of 10-12 years (I am stating this from memory and have no specific source to list) the increase to the cost of construction will be paid back in savings and from that point on the added savings will decrease the overall cost.

REVIEW RECOMMENDATION
Approve
Disapprove
Approve as amended
Further Study